



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
[www.uspto.gov](http://www.uspto.gov)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/087,977	03/05/2002	David D. Rowley	23415-014	9574
909	7590	05/16/2006	EXAMINER	
PILLSBURY WINTHROP SHAW PITTMAN, LLP				HARRIS, CHANDA L
P.O. BOX 10500				
MCLEAN, VA 22102				
		ART UNIT		PAPER NUMBER
		3715		

DATE MAILED: 05/16/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/087,977	ROWLEY ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Chanda L. Harris	3715	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on 13 January 2006.  
 2a) This action is **FINAL**.                    2b) This action is non-final.  
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 1-7,9-17,19-27,29,30,32-36 and 38 is/are pending in the application.  
 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
 5) Claim(s) \_\_\_\_\_ is/are allowed.  
 6) Claim(s) 1-7,9-17,19-27,29,30,32-36 and 38 is/are rejected.  
 7) Claim(s) \_\_\_\_\_ is/are objected to.  
 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.  
 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
 a) All    b) Some \* c) None of:  
 1. Certified copies of the priority documents have been received.  
 2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- 1) Notice of References Cited (PTO-892)  
 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)  
 3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
     Paper No(s)/Mail Date 1/13/06, 8/3/05.
- 4) Interview Summary (PTO-413)  
     Paper No(s)/Mail Date. \_\_\_\_\_.  
 5) Notice of Informal Patent Application (PTO-152)  
 6) Other: \_\_\_\_\_.

## **DETAILED ACTION**

### ***Continued Examination Under 37 CFR 1.114***

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 1/13/06 has been entered.

### ***Status of Claims***

In response to the Amendment filed 1/13/06, Claims 1-7, 9-17, 19-27, 29-30, and 32-36, and 38 are pending. Claims 8, 18, 28, 31, and 37 are canceled.

### ***Claim Objections***

Claims 2-5 are objected to because of the following informalities: Claim 1 recites the limitation "the practical exercise" in line 5. There is insufficient antecedent basis for this limitation in the claim. Appropriate correction is required.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

**Claims 1, 4-6, 9-12, 14-17, 19-21, 24-26 and 29-30 are rejected under 35**

**U.S.C. 102(e) as being anticipated by Wall et al. (US 6,371,765).**

1. [Claims 1,12,21]: Regarding Claims 1,12, and 21, Wall discloses associating an information technology (IT) exercise (i.e., learning modules) with one or more of a plurality of virtual machines (i.e., hardware and software simulators). See Abstract. Wall discloses pre-configuring each of the one or more of the plurality of virtual machines with at least a set of virtual machine files (i.e., learning modules) associated with the IT exercise, wherein the set of virtual machine files determines a virtual machine state (i.e., configuration). See Col.2: 59-65. Wall discloses launching the one or more of the plurality of virtual machines associated with the IT exercise in the virtual machine state using the set of virtual machine files. See Col.2: 59-65. Wall discloses displaying to the user, information (i.e., lesson plan) that is associated with the IT exercise, wherein the information describes tasks that the user is instructed to complete. See Col.5: 26-29. Wall discloses performing the tasks on the set of virtual

machine files of the one or more of the plurality of virtual machines, wherein the performed tasks place the one or more of the plurality of virtual machines into a new state (i.e., configuration), and wherein the plurality of virtual machines are configured to run an operating system (i.e., inherent by their computer-based implementation). See Col.2: 62-65. Wall discloses a storage medium (i.e., computer-based training system). Wall discloses a first software application stored on the storage medium for allowing multiple virtual machines (i.e., hardware and software simulators) to run on a single computer system, wherein the virtual machines are configured to run an operating system. See Abstract. Wall discloses a first software application (i.e., software simulator) stored on the storage medium for allowing multiple virtual machines to run on a single computer system, wherein the virtual machines are configured to run an operating system. See Abstract. Wall discloses a second software application stored on the storage medium and configured to present one or more exam items (e.g., via a test or quiz) to a user, wherein the exam items include an information technology (IT) exercise and is capable of having at least one of a multiple choice question and an essay question, and wherein one or more of the multiple virtual machines are associated with the IT exercise. See Col.9: 23-45. Wall discloses a processor (i.e., computer) for executing the first and second software applications. See Abstract.

2. [Claims 4,9, 24]: Regarding Claims 4,9, and 24, Wall discloses wherein the tasks require the user to modify (i.e., via effectuating inputs) a particular file of the set of virtual machine files. See Col.2: 62-65.

Art Unit: 3715

3. [Claims 5,10,19-20,25,29-30]: Regarding Claims 5,10,19-20, 25, and 29-30, Wall discloses wherein the act of evaluating how well the user performed the IT exercise comprises examining the modifications made to the particular file to determine whether the particular file was modified correctly in Col.9: 53-58:

Thereafter, the end-user enters a command for effectuating a hardware, software, or firmware function of the emulated device. If an error is reported by the command inference engine of the ICBT simulator (decision 906), the end-user may activate an appropriate troubleshooting module (step 910).

4. [Claims 6,17,26]: Regarding Claims 6,17, and 26, Wall discloses accessing a test file (e.g., test or quiz) comprising one or more exam items. See Col.9: 30-45. Wall discloses presenting one or more exam items to the user, wherein the examination items include at least one of an information technology exercise, and wherein the IT exercise is associated with one or more of a plurality of virtual machines (i.e., simulated equipment). See Col.9: 30-32. Wall discloses selecting one of one or more exam items. See Col.9: 30-32. Wall discloses determining whether the selected exam item is an exercise (inherent) and; if the selected exam item is an IT exercise, the one or more of a plurality of virtual machines associated with the IT exercise and that are each pre-configured with at least a set of virtual machine files associated with the IT exercise, wherein the set of virtual machine files determines a virtual machine state, and wherein the plurality of virtual machines run an operating system. See Col.9: 23-45 and Col.2: 56-65. Wall discloses displaying to the user, information that is associated with the IT exercise, wherein the information describes tasks that the user is instructed to complete, and performing the tasks on the set of virtual machine files of the one or more

of the plurality of virtual machines wherein the performed tasks place one or more of the plurality of virtual machines into a new state. See Col.2: 62-65 and Col.5: 26-29. Wall's invention is capable of presenting, if the selected exam item is determined to be at least one of a multiple choice question and an essay question, the exam item to the user and waiting for a user response. See Col.9: 30-36.

5. [Claim 11]: Regarding Claim 11, Wall's invention is capable of providing wherein the act of evaluating how well the user performed the IT exercise comprises examining a file that was not supposed to be modified in performing the IT exercise (i.e., via a list of most common causes that are likely to have caused a particular error). See Col.9: 63-65.

6. [Claim 14]: Regarding Claim 14, Wall discloses wherein the second software application comprises a test driver and a practical skill testing module (e.g., quiz). See Col.9: 30-32.

7. [Claims 15]: Regarding Claims 15, Wall discloses wherein the test driver is operable to: read a test file that comprises the one or more exam items; select an exam item; determine whether the selected exam item is associated with the IT exercise. See Col.9: 23-32. Providing an exam identifier to the PSTM if it is determined that the exam item is associated with the IT exercise, wherein the exam identifier identifies the elected exam item; and waiting for a response from the PSTM after providing the exam item to the PSTM would have been an inherent feature in Wall's invention as a result of the end-user activating a test or quiz menu. See Col.9: 27-36.

8. [Claim 16]: Regarding Claim 16, Wall discloses wherein the second software application displays the virtual machines in a testing window (e.g., multimedia presentation) provided by the test driver. See Col.9: 36-45.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

**Claims 2,7,13, 22 and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wall in view of Papadopoulos (US 6,099,320).**

[Claims 2,7,13,22,27]: Regarding Claims 2,7,13, 22, and 27, Wall does not disclose expressly setting a timer to expire after a certain amount of time has elapsed; waiting for the user to complete the IT exercise and/or for the timer to expire; and evaluating how well the user performed the exercise. However, Papadopoulos teaches such in Col.6: 14-24:

The student will have a time limit, typically 20 seconds, for answering each question on a test. After a question is posed, both an analog and a digital ~~timer~~ are displayed, showing the time remaining for answering the question and changing from green to yellow to red as the time ~~expires~~. If the student does not pass the test within the allowed time, the screen containing the material that is being reviewed is redisplayed and the student has another opportunity to learn the information. The student is sent back after failing a

test question as often as necessary until the student learns the information and can answer all questions correctly.

Therefore, at the time of the invention, it would have been obvious to one of ordinary skill in the art to incorporate the aforementioned limitation into Wall's invention, in light of the teaching of Papadopoulos, in order to facilitate a student learning the exercise.

**Claims 3 and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wall/Papadopoulos as applied to claim 2 above, and further in view of Bullen (US 6,033,226).**

[Claims 3,23]: Regarding Claims 3 and 23, Wall/Papadopoulos does not disclose expressly wherein the act of evaluating how well the user performed the IT exercise comprises comparing the new state with a benchmark (i.e., ideal operations). However, Bullen teaches such in Col.10: 32-44:

The training software 8 can interpret such information stored in the memory 7 to give meaning to a movement by the trainee 4 of the input device 12 (which may be a trackball, for example) as corresponding to a computer-controlled repositioning of the drill bit or a computer-commanded change in the drill bit velocity, for example. The training software 8 further interprets such information from the input device 12 in light of the machine-defining information in the memory 7 and in view of a history of machine movements thus commanded by the trainee 4 to determine the present state or position of each element (e.g., the drill bit and the workpiece) of the machine tool 11 and furthermore infer from such a history the nature of the operation being performed by the trainee 4. Furthermore, the training software 8 infers the parameters of such an operation and compares them with the templates of the ideal operations stored in the memory 7 to determine how well the trainee is

Art Unit: 3715

doing and to determine what kinds of errors he may be committing.

Therefore, at the time of the of the invention, it would have been obvious to one of ordinary skill in the art to incorporate comparing the new state with a benchmark into the invention of Wall/Papadopoulos, in light of the teaching of Bullen, in order to determine how well the trainee is doing and to determine what kinds of errors he may be committing.

**Claims 32-36 and 38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wall in view of Bullen.**

[Claims 32-36,38]: Regarding Claims 32-36 and 38, Wall does not disclose expressly wherein one or more of a plurality of virtual machines include a first virtual machine that is configured to run a first operating system and second virtual machine that is configured to run a second operating system different from the first operating system. However, Bullen teaches such (i.e., windows-bases or UNIX) in Col.4: 24-26:

The computer 6 of the training system 2 is preferably a workstation, such as a windows-based personal computer or a UNIX computer workstation.

Therefore, at the time of the invention, it would have been obvious to one of ordinary skill in the art to incorporate the aforementioned limitation into the method and system of Wall, in light of the teaching Bullen, in order to support different operating platforms.

**Claims 32-36 and 38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wall in view of Bugnion et al. (US 6,075,938).**

[Claims 32-36,38]: Regarding Claims 32-36 and 38, Wall does not disclose expressly wherein one or more of a plurality of virtual machines include a first virtual machine that is configured to run a first operating system and second virtual machine that is configured to run a second operating system different from the first operating system. However, Bugnion teaches such in Col.5: 61-64 and Col.7: 52-58 (i.e., multiple virtual machines that run independent operating systems and application programs). Therefore at the time of the invention, it would have been obvious to one of ordinary skill in the art to incorporate the aforementioned limitations into the method and system of Wall, in light of the teaching of Bugnion, in order to provide a way of introducing new and innovative system software while still providing a stable computing base for applications that favor stability over innovation.

***Citation of Pertinent Prior Art***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- Wall et al. (US 6,766,311)
  - state transition system and method in interactive computer-based training
- Rowley et al. (US 6,941,105)
  - virtual machine platform to launch determined virtual machines

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Chanda L. Harris whose telephone number is 571-272-4448. The examiner can normally be reached on M-F 6:30am-4:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Olszewski can be reached on 571-272-6788. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

*Chanda L. Harris*  
Chanda L. Harris  
Primary Examiner  
Art Unit 3715